

Army-Baylor University Graduate Program
in Health Care Administration

Graduate Management Project
Strategic Plan: Initiating an Orthopaedic Residency at Womack Army Medical Center

Presented To

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**Graduate Management Project Strategic Plan:
Initiating an Orthopaedic Residency at Womack Army Medical Center**

Abstract

The purpose of this Graduate Management Project is to delineate the strategic planning necessary to implement an orthopaedic residency at Womack Army Medical Center (WAMC). Ginter, Swayne, and Duncan's strategic planning process as outlined in *Strategic Management of Healthcare Organizations* (2002) provides an ideal framework to ensure performance measures are addressed while identifying potential organizational shortcomings. Currently, strategic direction toward implementing an orthopaedic residency does not exist, making the research question evident: What is the strategic plan to implement an ACGME Orthopaedic Residency Program at WAMC?

The following measures and analytic tools are applicable to outlining WAMC's strategy: analysis of Porter's Five Forces Model; a Strategic Map for discovering competitive advantages and disadvantages; identifying a directional strategy to include analyzing mission, vision, values, and goals; unit action planning; and controlling strategy through performance evaluation. These specific measures are presented within a directional strategy linking WAMC's strategic goal of establishing an ACGME recognized Orthopaedic Residency Program with the organization's vision of being the Army's Medical Center of Excellence. Economic and functional analysis of this directional strategy indicates implementing an Orthopaedic Residency at WAMC is not currently a realistic goal.

**Graduate Management Project Strategic Plan:
Initiating an Orthopaedic Residency at Womack Army Medical Center**

Table of Contents

Acknowledgements.....	2
Abstract.....	3
Table of Contents.....	4
List of Figures.....	6
List of Tables.....	7
Introduction.....	8
<i>Conditions Prompting the Study.....</i>	<i>9</i>
<i>Statement of the Problem.....</i>	<i>10</i>
<i>Literature Review.....</i>	<i>10</i>
<i>Summary of Purpose.....</i>	<i>17</i>
Method and Procedures.....	17
<i>Research Plan.....</i>	<i>17</i>
<i>Reliability and Validity.....</i>	<i>18</i>
Results.....	19
<i>Workload and Economic Analysis.....</i>	<i>20</i>
<i>Situational Analysis and the Organizational Setting.....</i>	<i>24</i>
<i>Strategy Formulation.....</i>	<i>28</i>
<i>Strategic Implementation.....</i>	<i>29</i>
<i>Strategic Control.....</i>	<i>31</i>
Discussion.....	33
<i>Workload and Economic Analysis.....</i>	<i>34</i>

<i>Situational Analysis and the Organizational Setting</i>	34
<i>Strategy Formulation</i>	35
<i>Strategic Implementation</i>	36
<i>Strategic Control</i>	37
<i>Utility</i>	37
<i>Timeline</i>	38
Conclusions.....	39
Recommendations.....	40
Appendix A: Glossary of Terms.....	42
Appendix B: Economic Impact.....	44
References.....	46

**Graduate Management Project Strategic Plan:
Initiating an Orthopaedic Residency at Womack Army Medical Center**

List of Figures

<i>Figure 1. FY04 Orthopaedic Service Patient Visits.....</i>	<i>21</i>
<i>Figure 2. WAMC's FY04 Recaptured Workload Comparison</i>	<i>22</i>
<i>Figure 3. Personnel Requirements in Expanding Orthopaedic Services and Adding an Orthopaedic Residency at WAMC.....</i>	<i>23</i>
<i>Figure 4. Stakeholder Analysis.....</i>	<i>25</i>
<i>Figure 5. Porter's Five Forces Analysis.....</i>	<i>26</i>
<i>Figure 6. Strategic Map of Advantages and Disadvantages.....</i>	<i>27</i>
<i>Figure 7. Directional Strategy</i>	<i>28</i>
<i>Figure 8. Unit Action Planning.....</i>	<i>30</i>
<i>Figure 9. Strategic Controls.....</i>	<i>32</i>

**Graduate Management Project Strategic Plan:
Initiating an Orthopaedic Residency at Womack Army Medical Center**

List of Tables

Table 1. <i>Economic Impact of Total Joint Surgery Expansion</i>	44
Table 2. <i>Economic Impact of Spine Surgery Expansion</i>	44
Table 3. <i>Economic Impact of Orthopaedic Residency</i>	45
Table 4. <i>Summary Economic Impact of Orthopaedic Service Expansion and Residency Addition</i>	45

**Graduate Management Project Strategic Plan:
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Introduction

The purpose of this paper is to delineate the strategic planning necessary to implement an orthopaedic residency at Womack Army Medical Center (WAMC). Preparation for implementing an Accreditation Council for Graduate Medical Education (ACGME) approved orthopaedic residency must address staffing, workload, budget, patient mix, and equipment needs while supporting the Medical Center's mission, vision, and values. Ginter, Swayne, and Duncan's strategic planning process as outlined in *Strategic Management of Healthcare Organizations* (2002) provides an ideal framework to ensure focus areas such as these are addressed and draws attention to areas in need of further action. Currently, strategic direction toward implementing an orthopaedic residency does not exist, making the research question evident: What is the strategic plan to implement an ACGME Orthopaedic Residency Program at WAMC?

The utility of such a Graduate Management Project centers on insight gained through the strategic planning process. Ginter et al. (2002) state strategic planning is the "actual process of creating strategy . . . the means an organization chooses to move from where it is today to a desired state some time in the future" (p. 14). Their work outlines numerous options in generating strategy. The following measures and analytic tools are applicable to outlining WAMC's strategy: stakeholder analysis; analysis of Porter's Five Forces Model; a strategic map for discovering competitive advantages and disadvantages; identifying a directional strategy to include analysis of mission, vision, values, and goals; unit action planning; and controlling strategy through performance evaluation. This

paper applies and interprets the results of each of these particular measures to identify a strategy whereby WAMC establishes an ACGME recognized orthopaedic residency.

Conditions Prompting this Study

On August 1, 2005, the WAMC Commander, COL Ronald Maul, provided the Medical Center's Executive Staff command guidance regarding areas of emphasis for his second year in command. COL Maul's *Second Year Emphasis* identifies the Commander's intent to "formalize the staff work for developing a [resident] program in Orthopaedic Surgery" (2005, p. 1). The ACGME defines orthopaedic surgery in the organization's *Program Requirements for Graduate Medical Examination* as "the medical specialty that includes the study and prevention of musculoskeletal diseases, disorders, and injuries and their treatment by medical, surgical, and physical methods" (Accreditation Council for Graduate Medical Education, 2004, p.1). This nationally recognized accrediting council further mandates orthopaedic residents' experience in adult care must include joint reconstruction and surgery of the spine, including disk surgery as well as treatment of trauma and deformities of the spine. Further, trauma experience must include pediatric and multisystem trauma. Surgical experience must include "hand surgery; foot surgery in adults and children; athletic injuries, including arthroscopy; metastatic disease; and orthopaedic rehabilitation, including amputations and postamputation care" (p. 7). A review of orthopaedic services at WAMC immediately drew attention to shortcomings in the department's ability to support resident experiences in pediatric trauma, joint reconstruction, and spinal surgery. Simply stated, the Department of Orthopaedics and Rehabilitation (DOR) is faced with a need to identify service expansion areas and subsequent staffing needs as primary decision points

in an attempt to address the Medical Center Commander's intent to add an orthopaedic residency program.

Statement of the Problem

Currently, strategic planning toward implementing an orthopaedic residency at WAMC does not exist. Ginter et al. (2002) state, "health care organizations that do not have a clear strategy are doomed to mediocrity at best – and failure at worst" (p. ix). While taskings through separate work areas within the Medical Center are likely to address staffing, workload, budget, case mix, and equipment needs, the lack of an operational framework to meet the Commander's intent may arguably result in mediocrity or even failure, as Ginter et al. suggest. The research question is therefore evident: What is the strategic plan to implement an ACGME Orthopaedic Residency Program at WAMC?

Literature Review

A literature review was conducted while executing this Graduate Management Project. The review focuses on an overview and current summation of graduate medical education (GME), its utility in the Military Health System (MHS), and the accreditation process as well as research identifying projected changes to the current accrediting practice. Research specific to financing GME and clinical findings specific to WAMC DOR is also addressed. Finally, research addressing the impact of strategic planning on implementing change and the effectiveness of strategic planning on health care is presented.

GME is the clinically-based period of study including internships, fellowships, and residency programs enabling medical school graduates to become specialists in areas

such as internal medicine, radiology, and general or orthopaedic surgery. GME programs in military treatment facilities are the Department of Defense's (DOD) primary source of active duty physicians. Backhus recognizes the MHS, with costs over \$15 billion annually, as having "the dual mission of providing medical care to 1.6 million military personnel during war and other military operations and offering health care to 6.6 million military dependents and retirees" (1998, p. 4). At the time of this General Accounting Office (GAO) study, approximately 3,000 of the 12,275 physicians in the MHS were enrolled in GME programs with military healthcare facilities. This GAO study indicates the DOD views GME as essential to medical care provider recruitment and retention and identifies the post-graduate training as the "primary pipeline for developing and maintaining the required mix of medical provider skills to meet wartime and peacetime care needs" (p. 4). DOD's Office of Health Affairs (HA) develops GME policy guidance and promotes GME program coordination among the military services. Each branch of service (Army, Navy, and Air Force) is responsible for ensuring HA-level GME goals are met. Each branch is further responsible for maintaining individual GME programs. The Backhus GAO study concluded that across the MHS, "civilian boards review DOD's GME programs to ensure that they meet such medical standards as minimum numbers of trainees per program and can thus be accredited" (p. 5).

Joyner (2004, p. 34) defines accreditation as a "method of maintaining established standards set forth by a given discipline, and the means by which these standards may be measured with the distinct goals of showing improvement and demanding accountability." He further describes the ACGME as the nationally recognized "governing body responsible for the accreditation of post-medical doctorate training

programs in the United States” (p. 34). *The ACGME at a Glance* (Accreditation Council for Graduate Medical Education, 2005) identifies the organization as a private, non-profit entity established from a consensus of the medical academic community in 1981 as an independent accrediting organization. The council’s origins can be traced to 1972 and the activity of the Liaison Committee for Graduate Education. The organization’s *Mission Statement* (2005) declares the ACGME is to “improve the quality of health care in the United States by ensuring and improving the quality of graduate medical education experiences for physicians in training” (para. 1).

The Role of the ACGME (Accreditation Council for Graduate Medical Education, 2006) defines a residency program as clinical education in a medical specialty following medical school graduation in preparation for independent medical practice. The ACGME provides accreditation to 110 medical specialties and subspecialty areas including all programs resulting in primary certification by the American Board of Medical Specialties. One prerequisite of medical board certification is “completion of an ACGME-accredited residency program” (para 2).

ACGME recognizes an application process for new residency programs requiring the submission of a comprehensive self-evaluation of the requesting program, the Program Information Form (PIF). New programs are required to complete a period of “provisional accreditation” during which time the program must demonstrate “compliance with accreditation standards [to] receive full accreditation” (*The Role of the ACGME*, para 6). Accredited programs undergo site visits by the ACGME approximately every three to four years with each visit requiring resubmission of the residency’s PIF.

Joyner (2004) recognizes significant change to the ACGME accreditation process in recent years. Since 1999, the council no longer grants accreditation to health facilities demonstrating a potential to educate. Rather, the ACGME now seeks the ability of each program to record through identified metrics and measurable outcomes actual educational accomplishment. Organizations are currently required to identify problems and means of repair, initiate corrections to educational limitations or issues, and document outcome corrections. Further, the ACGME has purposefully adopted a “minimal language” approach requiring programs to address six core competencies: patient care, interpersonal and communications skills, medical knowledge, professionalism, practice-based learning and improvement, and systems-based practice (p. 36).

The Association of Professors of Medicine (2004) builds upon the internal competencies outlined by the ACGME in calling for “closer links between certifying and accrediting bodies . . . to build knowledge about good learning for good health care” (p. 861). This association recognizes a shift in accreditation processes from whether a program “meets minimal process and structure standards to whether the program systematically produces competent graduates” (p. 860). The association lists sources of external measures including: United States Medical Licensing Examination or board certification pass rates for individual programs; surveys of program directors, graduated residents, and existing trainees; portfolios of clinical experiences and results; and surveys of health care systems receiving graduates of the educational program. The association foresees a future of graduate medical education linking communication among regulating bodies, medical schools, residency programs, and practitioners in order to build upon medical education knowledge. Pellegrini, Warshaw, and Debas (2004) reiterate that

while board certification remains a key, measurable aspect of the accreditation process, demonstration and documentation of actual training, surgical logs, and “in the not too distant future, demonstration of proficiency in all six areas of [ACGME] competence . . . will play an increasingly important role in the initial credentialing process” (p 956). This Graduate Management Project draws attention to WAMC’s requirement to meet the ACGME Six Core Competencies in order to support accreditation.

A discussion of GME must address costs and funding associated with the post-graduate medical training. Covey and Friedlaender (2003) summarize current funding of civilian GME in the U.S. Using 2001 data, the researchers found “the only explicit funding sources for resident education are Medicare and, in most states, Medicaid, which provide roughly \$6 billion and \$2 billion, respectively, each year for expenses related to graduate medical education” (p. 1594). Their work indicates Medicare payments for GME are made directly to the academic health center administration, defined as one of 125 American institutions comprising a medical school, a faculty practice plan, and associated or affiliated hospitals. Only a variable portion of these funds makes its way to the program director at each institution. The 1998 GAO report indicates cost of GME in the MHS “is unclear” (Backhus, p. 4). While no Medicare or Medicaid funding for GME is available to the MHS, the DOD Inspector General (1997) reported GME costs of \$125.6 million annually, with per student costs ranging from about \$20,268 to \$99,750. The report also indicates military treatment facilities do not accurately account for GME costs.

A literature search addressing orthopaedic research involving WAMC DOR was also conducted. Of note, Kragh and Basamania (2002) conducted a clinical investigation

through the Orthopaedic Service of WAMC focused on static line jump injuries. Their research recognized Ft. Bragg as being “home to 25,000 paratroopers . . . [where] approximately 90,000 parachute jumps occur annually” (p. 992). The results of their investigation centering on shoulder injury unique to airborne operations lead to their recommending surgical intervention for static line injury “be performed the day after injury” and that the results of surgical repair are “superior to those of nonoperative treatment in terms of strength, appearance, and patient satisfaction” (p. 998). This particular study is of interest to establishing an orthopaedic residency at WAMC, as it addresses specialized patient care focused on a population concentrated in and around Ft. Bragg.

The literature review for this project addresses strategic planning’s relevance to surgical residency programs. Anderson (2005) identified key elements required in supporting the strategy of a successful surgical residency. She found the program’s vision to be “the single most important concept [needing] to be shared and understood by faculty and residents alike.” She indicates it is essential that all parties involved in a residency “be oriented to the goals and expectations of the program . . . conveying [the] mission in a consistent and tangible manner” (para. 2). Corboy and Corrbui (2002) recognize while “change is never easy . . . the task of putting strategy to work can be made much easier and have greater chances of success by avoiding the seven deadly sins [of strategy implementation]” (para.15). These researchers’ “deadly sins” are: the strategy is not worth implementing; people are not clear how the strategy will be implemented; customers and staff do not fully understand the strategy; individual responsibilities for implementing the change are not clear; chief executives and senior

managers step out of the picture once the implementation begins; the “brick walls” (obstacles to change) are not recognized; and forgetting to “mind the shop” (strategy is equally as important as continuing daily operations) (para. 12-13). This project focuses attention on WAMC’s intent to establish an orthopaedic residency while avoiding the deadly sins of strategy implementation.

Finally, the literature review addresses the effects strategic planning has on health care delivery. Begun and Kaissi (2005) recognize documented outcomes of strategic planning processes by health care organizations are sparse. These researchers’ comprehensive review of literature yielded few and mixed results on the relationship between performance and strategic planning. These findings led Begun and Kaissi to survey current impressions of the impact of strategic planning on healthcare organizational performance. The researchers interviewed leaders in 20 healthcare organizations in Minneapolis / St. Paul and San Antonio in the summer of 2004. Begun and Kaissi conclude most healthcare leaders interviewed agreed “strategic planning contributes to organizational focus, fosters stakeholder participation and commitment, and leads to achievement of strategic goals” (p. 264). Ginter et al. identify an organization’s mission, vision, values, and strategic goals as “directional strategies because they guide strategists when [making] key organizational decisions” (2002, p. 177). This project frames a strategic design, referred to as a directional strategy, focused on WAMC establishing an ACGME accredited Orthopaedic Surgery Residency in support of the Medical Center Commander’s Vision to be “The Army’s Medical Center of Excellence” (Maul, *Command Home Page*, p. 1).

Summary of Purpose

The purpose of this project is to apply the strategic planning process, and interpret and analyze the results of this process in support of establishing an orthopaedic residency at Womack Army Medical Center, Ft. Bragg, NC. The intent is to use the strategic planning process outlined by Ginter et al. as a framework in pursuing the residency within the Medical Center's current mission, vision, and values. Identifying a directional strategy will support the Medical Center Commander's intent to attain recognition as an ACGME site for Orthopaedic Surgery. Situational analysis and determining the Medical Center's competitive advantages unique to the organization will provide insight in supporting COL Maul's emphasis for the second year of his command. The methodology section identifies the project's design and associated analysis.

Method and Procedures

This project provides detailed insight into the strategic planning process as it pertains to WAMC as an organization, and the Commander's intent to establish an orthopaedic residency within the Medical Center. This particular strategic plan includes analysis of the internal and external environment, formulation of a directional strategy including analysis of the unit's mission, vision, and values, the implementation of unit action planning, and control of strategic direction through performance evaluation. A glossary of terms is provided the reader in Appendix A.

Research Plan

A systematic approach to developing a strategic plan was followed while completing this management project. This approach encompassed establishing background history on orthopaedic workload and the economic impact of orthopaedic

services expansion, situational analysis, strategy formulation, strategy implementation, and strategic control.

The strategic analysis presented is based on the author's active participation in the WAMC Orthopaedic Residency Process Action Team. This team's intent is to support the Medical Center's goal of establishing an ACGME Orthopaedic Residency at WAMC. The team was formed to create a series of decision briefs to the WAMC Executive Committee (EXCOM) in support of this stated goal. The team further supported site visits to Womack by the Army Orthopaedic Surgical Consultant to the Army Surgeon General, and the Army Consultant for Graduate Medical Education.

It should be noted no individual, patient-identifiable information is disclosed in this Graduate Management Project. The views expressed are those of the author, and not Womack Army Medical Center, Baylor University, or the U.S. Army. Historic data inquiries are based on Calendar Year (CY) and Fiscal Year (FY) 2004, when applicable. Data addressed within this project were retrieved through the MHS Mart (M2), the patient-level data warehouse for the Military Health System.

Reliability and Validity

Cooper and Schindler (2003) recognize reliability and validity as major criteria in evaluating research design. The authors indicate validity addresses the extent to which research measures that which is intended, while reliability addresses the accuracy and precision of the research plan. More specifically, external validity identifies a study's "ability to be generalized across persons, settings, and times" (p. 231). The authors suggest reliability may be improved upon by addressing investigator consistency through using "well-trained, supervised, and motivated persons to conduct the research" (p. 239).

WAMC's Directorate of Business Operations (DBO) formed a process action team consisting of multiple medical center staff sections: Department of Orthopaedics and Rehabilitation, Physical Therapy Service, Department of Surgery, Department of Nursing, Quality Service Division, Department of Pharmacy, Logistics Division, Facility Management Branch, Infection Control Division, Department of Pathology, Department of Radiology, the Medical Center's Nurse Methods Analyst, and Continuing Education Section. The author's active participation in this planning group has proven vital in completing this project. The role of this working group remains not limited to supporting the taskings of specified unit action plans, but also provides expert input into strategy implementation. This team delineates the well-trained and motivated persons necessary to establish reliability. The team's focused efforts continues to ensure the intent of the project is met while also generalizing the effort across people, setting, and time; recognized as essential to research design by Cooper and Schindler. Subject Matter Expert representation from each of these specialized areas remains vital to implementing this strategy in light of personnel changes at a time of war. The validity of this Strategic Plan will be made evident should command formalize the intent to establish an orthopaedic surgical residency program at WAMC and the actual implementation of an ACGME accredited Orthopaedic Residency.

Results

The WAMC Process Action Team responsible for supporting the Commander's intent to establish an ACGME accredited Orthopaedic Residency successfully gained the endorsement of the Medical Center Command on November 9th, 2005 (Department of the Army, Institutional statement, p. 1). This endorsement is the end state of presentations

and site visits culminating with a decision brief to the Commander on October 19th, 2005 (*Addition of Services and Implementation of an Orthopaedic Residency at Womack Army Medical Center*). This command endorsement serves as the cover letter for the PIF submission to the Residency Review Committee (RRC) for Orthopaedic Surgery, ACGME (2005).

The Orthopaedic Surgery RRC met on January 13th, 2006 and indicated in early February the committee's findings that WAMC should defer final review until June 2006. This requirement for subsequent review serves to focus the Medical Center's corrective actions on delineated shortcomings in current planning. The shortcomings identified by the RRC in January of 2006 include: failure to identify an American Board of Orthopaedic Surgery certified Program Director; insufficient representation of board-certified and experienced faculty; absence of ACGME-accredited programs in pediatrics, general surgery, and internal medicine; insufficient volume and variety of operative experience; and insufficient teaching staff involvement in scholarly activity (Accreditation Council for Graduate Medical Education, 2006).

Workload and Economic Analysis

A series of decision briefs were presented to the WAMC EXCOM in September and October 2005. The purpose of these presentations was to present the economic and qualitative analysis derived to support expanding orthopaedic services at WAMC and establishing an orthopaedic residency at the Medical Center. The FY04 orthopaedic workload (identified as the number of Orthopaedic Service patient visits) for all Army Medical Centers currently housing orthopaedic residency programs as well as that of Darnall Army Community Hospital (DACH) are presented in Figure 1.

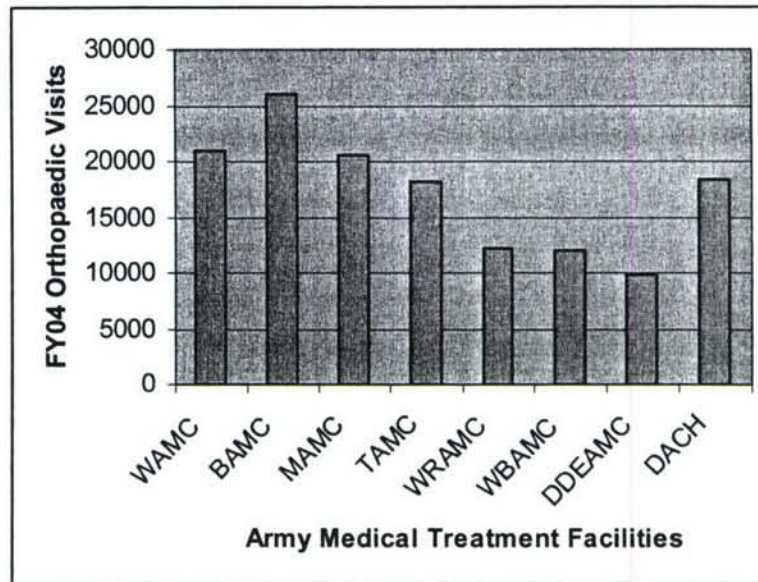


Figure 1. FY04 Orthopaedic Service Patient Visits.

Total patient visits for Orthopaedic Services at WAMC, Brooke Army Medical Center (BAMC), Madigan Army Medical Center (MAMC), Tripler Army Medical Center (TAMC), Walter Reed Army Medical Center (WRAMC), William Beaumont Army Medical Center (WBAMC), and Dwight D. Eisenhower Army Medical Center (DDEAMC) are indicated above. Each of these Orthopaedic Services currently hosts Orthopaedic Residency Programs. The workload for DACH is also indicated as this Medical Treatment Facility (MTF) serves a similarly sized catchment area to Ft. Bragg.

Expanded workload recapturing those orthopaedic services currently referred to the local network or other MTFs is presented in Figure 2 for similar comparison.

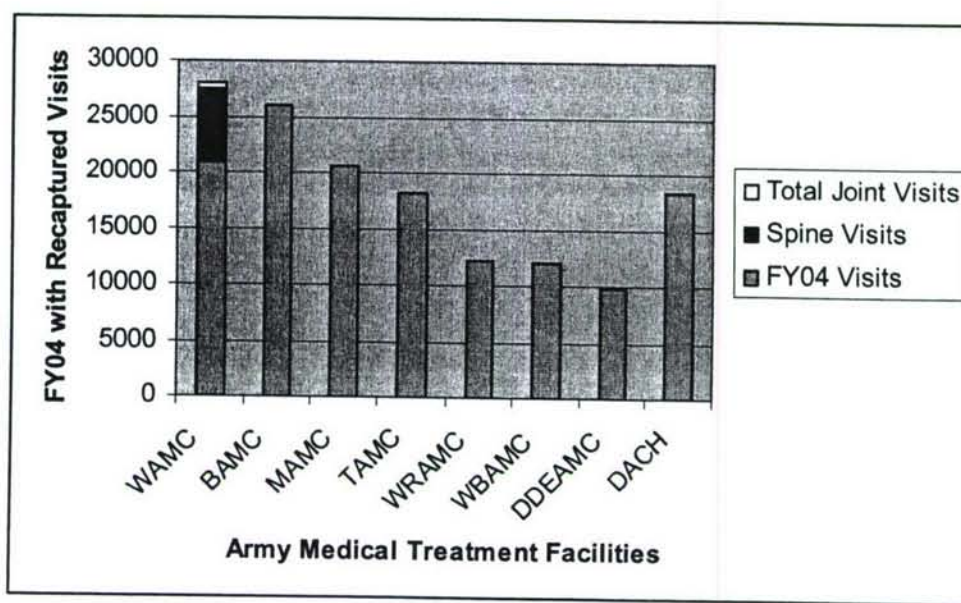


Figure 2. WAMC's FY04 Recaptured Workload Comparison.

WAMC's recaptured workload indicated above represents 6,633 Orthopaedic Spine Visits and 593 Total Joint Visits referred to network facilities and other MTFs in FY04.

Expanding upon orthopaedic services will require additional professional staffing and ancillary personnel. The proposal presented to the WAMC EXCOM centers on requesting an augmentation of WAMC's Table of Distribution and Allowance (TDA) to allow for the addition of an Active Duty Spine Surgeon to the Medical Center's Professional Staff. Total Joint Services are already within the clinical competencies of WAMC's present Orthopaedic Department. The role of Residency Coordinator, an ACGME requirement, is filled at other Army MTFs currently by a senior member of the Orthopaedic Surgery Staff. The projected personnel additions required to support expanding existing orthopaedic services and adding an Orthopaedic Residency to WAMC are presented in Figure 3.

FTE	Position (contract except where noted)	Cost
1.0	RN – Clinical Nurse Specialist (Ortho)	\$ 96,600
1.0	RN – Med-Surg	\$ 96,600
1.0	RN – ICU	\$ 96,600
1.0	RN – PACU	\$ 96,600
1.0	RN – OR	\$ 96,600
1.0	LPN – Med-Surg	\$ 48,410
1.0	OR Tech	\$ 45,210
1.0	Supply Tech (GS)	\$ 45,278
0.3	Physical Therapist	\$ 32,016
1.0	Ortho Tech	\$ 75,440
1.0	Ortho RAD Tech	\$ 68,080
1.0	Appt Clerk	\$ 27,600
1.0	Residency Coordinator	\$ 44,583
Total:		\$ 869,617

Figure 3. Personnel Requirements in Expanding Orthopaedic Services and Adding an Orthopaedic Residency at WAMC.

The economic impact of expanding current orthopaedic services at WAMC to recapture visits currently referred to other facilities as well as the financial impact of establishing an Orthopaedic Residency at WAMC is presented in Appendix B. Interpretation of the recaptured workload's economic impact is presented in the Discussion section.

Situational Analysis and the Organizational Setting

Situational analysis presented through this paper addresses WAMC's current mission, vision, and values within the context of the organization's internal and external environment. Stakeholder analysis identifies WAMC's relationships with the patients and family members of those pursuing the Medical Center's services as well as Ft. Bragg, Fayetteville, and North Atlantic Regional Medical Command (NARMC). This analysis identifies internal, interface, and external stakeholders. Service area analysis is summarized through Porter's Five Forces Analysis. This assessment addresses threats to new entrants, intensity of rivalry, threats to substitutes, the bargaining power of customers, and the bargaining power of suppliers as presented by Ginter et al. (2002), while internal analysis focuses on discovering competitive advantages and disadvantages.

Resultant analysis is provided through the diagrams that follow. The areas of study presented include stakeholder analysis (Figure 4), analysis of Porter's Five Forces Model as it pertains to WAMC's pursuit of an orthopaedic residency (Figure 5), and an analysis of the organization's competitive advantages and disadvantages (Figure 6). Interpretation of each of these strategic measures is provided in the Discussion section.

- | | | |
|--|--|--|
| <ul style="list-style-type: none"> • Internal <ul style="list-style-type: none"> – Command Section – Business Operations – Orthopaedics – Surgery – Physical Therapy – Nursing – Radiology – Pathology – Pharmacy – Quality Services – Logistics – Facilities – Infection Control | <ul style="list-style-type: none"> • Interface <ul style="list-style-type: none"> – Patients – Families – Physician Referrals – Graduate Medical Education – TRICARE Services | <ul style="list-style-type: none"> • External <ul style="list-style-type: none"> – RRC/ACGME – NARMC – MEDCOM – Ft. Bragg – GWOT Transfers – Medicare Services – Third Party Payers – Health Affairs – USUHS – Duke University – Johns Hopkins University – HealthNet Contractor |
|--|--|--|

Figure 4. Stakeholder Analysis of the impact of internal, external, and interface

influences on WAMC's plan to establish an Orthopaedic Residency.

Stakeholder analysis is conducted to identify those entities operating within the bounds of

WAMC (Internal Stakeholders), outside the organization (External Stakeholders), and

both internally and externally to the Medical Center (Interface Stakeholders).

Interpretation of this Stakeholder Analysis is presented in the Discussion section.

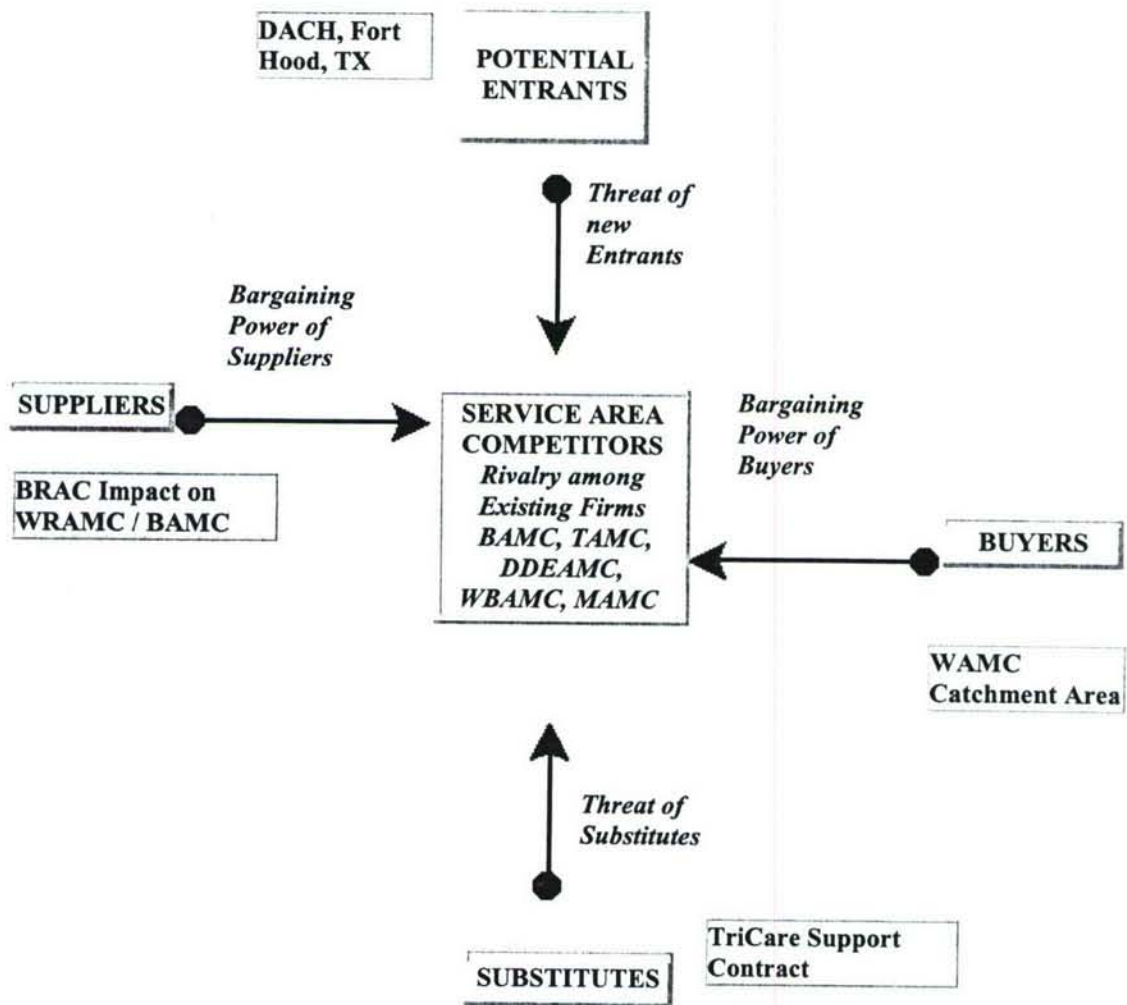


Figure 5. Porter's Five Forces Analysis of the impact of Service Area Competitors, Potential Entrants, Suppliers, Buyers, and Substitutes on WAMC's plan to establish an Orthopaedic Residency.

The Threat of New Entrants, and the Bargaining Power of Buyers and Suppliers are determined to be LOW. The Intensity of Rivalry and the Threat of Substitutes are determined to be HIGH. Interpretation of this Porter's Analysis is presented in the Discussion section.

Advantages

- Unique Population: 18th ABN Corps reports 107, 309 parachute jumps in FY04
- 755 Jump Injuries in WAMC ED, FY04
- 1,908 CHCS encounters Oct 03-Dec04
- Projected Workload Increase of 7,226 visits
- Historic Residency support to WRAMC, Willford Hall, and Duke University
- Total Joint Skill Set currently available
- Projected to decrease Patient TDY Costs
- Projected to expedite surgical turn-around
- Total Joint Service NPV \$24,408
- Surgical Spine Service NPV \$160,013
- Orthopedic Clinic supports Orthopedic Residency Footprint

Disadvantages

- Startup Cost \$3M
- Sustainment Cost \$2.8M
- Competing Residency Sites: DDEAMC, WRAMC, MAMC, BAMC, WBAMC, and TAMC
- Orthopedic Spine Surgeon required
- Research Program expansion required
- Residency Program NPV (\$289,757)
- Residency Coordinator required
- Facility Modifications Cost \$28,900
- Equipment Cost \$22,960
- TDY Cost \$185, 814

Addition of Services and Implementation of an Orthopaedic Residency at Womack Army Medical Center (2005)

Figure 6. Strategic Map of Advantages and Disadvantages.

Analysis of WAMC's advantages and disadvantages indicates the organization is not currently positioned to implement an orthopaedic residency currently, as demonstrated through the residency's negative Net Present Value (NPV). Further interpretation of these advantages and disadvantages is presented in the Discussion section.

Strategy Formulation

Strategy formulation within this management project focuses on directional strategy. Ginter et al. (2002) recognize an organization's mission, vision, values, and strategic goals as directional strategies "because they guide strategists when they make key organizational decisions" (p. 177). Recognizing a directional strategy, in this case the strategic goal of implementing an orthopaedic residency program supports the Commander's Vision of being The Army's Medical Center of Excellence. WAMC's mission, vision, and values are presented in Figure 7 (Maul, *Command Home Page*).

- | | |
|--|--|
| <ul style="list-style-type: none"> • Mission <ul style="list-style-type: none"> – Provide the highest quality health care, maximize the medical deployability of the force, ensure the readiness of Womack personnel, and sustain exceptional education and training programs • Vision <ul style="list-style-type: none"> – The Army's Medical Center of Excellence...the choice of America's finest • Values <ul style="list-style-type: none"> – Dignity and Respect – Courtesy and Compassion – Honor and Integrity | <ul style="list-style-type: none"> • Strategic Goal <ul style="list-style-type: none"> – Implement ACGME Orthopaedic Residency |
|--|--|

Figure 7. Directional Strategy tying the organization's mission, vision, and values to the strategic goal of implementing an orthopaedic residency program at WAMC.

Interpretation of this strategy formulation is presented in the Discussion section.

Strategy Implementation

Strategy implementation focuses on unit action planning. Value-adding service performance measures particular to this management project involve the addition of Total Joint Arthroplasty and Spine Surgery to the services currently offered in WAMC's DOR. Value-adding support performance measures addressed within this project include ancillary services in support of the expanded orthopaedic specialties and those services particular to the residency itself, for example, research support and the role of a residency coordinator. Unit action plans linking these performance measures to evaluation are summarized in Figure 8.

- *Objectives.*
 - WAMC command supports Orthopaedic Residency initiation
 - WAMC expands DOR services to include spine and total joint surgical specialties
 - WAMC achieves ACGME RRC accreditation
- *Unit Actions.*
 - DBO Orthopaedic Residency Team presents decision brief
 - DOR completes ACGME PIF
 - WAMC augments TDA to include Surgical Spine and Total Joint Service and the Orthopaedic Residency
- *Completion Times.*
 - DBO Team briefs EXCOM 21 Sep and 14 Oct 2005
 - DBO Team briefs Orthopaedic and GME Consultants to the Surgeon General 26 Oct 2005
 - DOR submits PIF to ACGME NLT 15 Nov of each application year
 - WAMC augments TDA by Summer 2006
- *Revenues and Costs.*
 - Total Joint Service \$24,408
 - Surgical Spine Service \$160,013
 - Orthopaedic Residency (\$289,757)
 - Funding additional services (costs)
 - Total Joint Service \$667,332
 - Surgical Spine Service \$2,039,070
 - Orthopaedic Residency \$289,757
- *Responsibilities.*
 - DBO Orthopaedic Residency Team Coordinator: Ms Wanda Jarrell, Management Analyst
 - DOR Orthopaedic Residency Program Director (Proposed): Dr. (MAJ) Dave Sickie
 - ACGME Designated Institutional Officer: Dr. (COL) Michael Rave
- *Budget Requests.*
 - Surgical Spine Service Expansion (personnel, equipment, variable costs): \$2,039,070
 - Total Joint Service Expansion (personnel, equipment, variable costs): \$677,332
 - Orthopaedic Residency (personnel, equipment, facility modification, travel): \$289,757

Addition of Services and Implementation of an Orthopaedic Residency at Womack Army Medical Center (2005)

Figure 8. Unit Action Planning illustrating the individual or team responsibilities necessary to accomplish identified objectives within a designated timeline to support WAMC initiating an Orthopaedic Residency Program.

Interpretation of this Unit Action Planning is presented in the Discussion section.

Strategic Control

Strategic control is captured within this management plan through performance evaluation. Roush and Ball stated “A strategy that cannot be evaluated in terms of whether or not it is being achieved is simply not a viable or even useful strategy” (1980, p. 6). Two notable performance measures captured within this management project are WAMC’s attaining ACGME residency accreditation for Orthopaedic Surgery, as well as command endorsement of the requests for funding and manpower required to initiate the program. Specific performance measures addressing ACGME staffing requirements and organizational manning modifications are addressed in Figure 9.

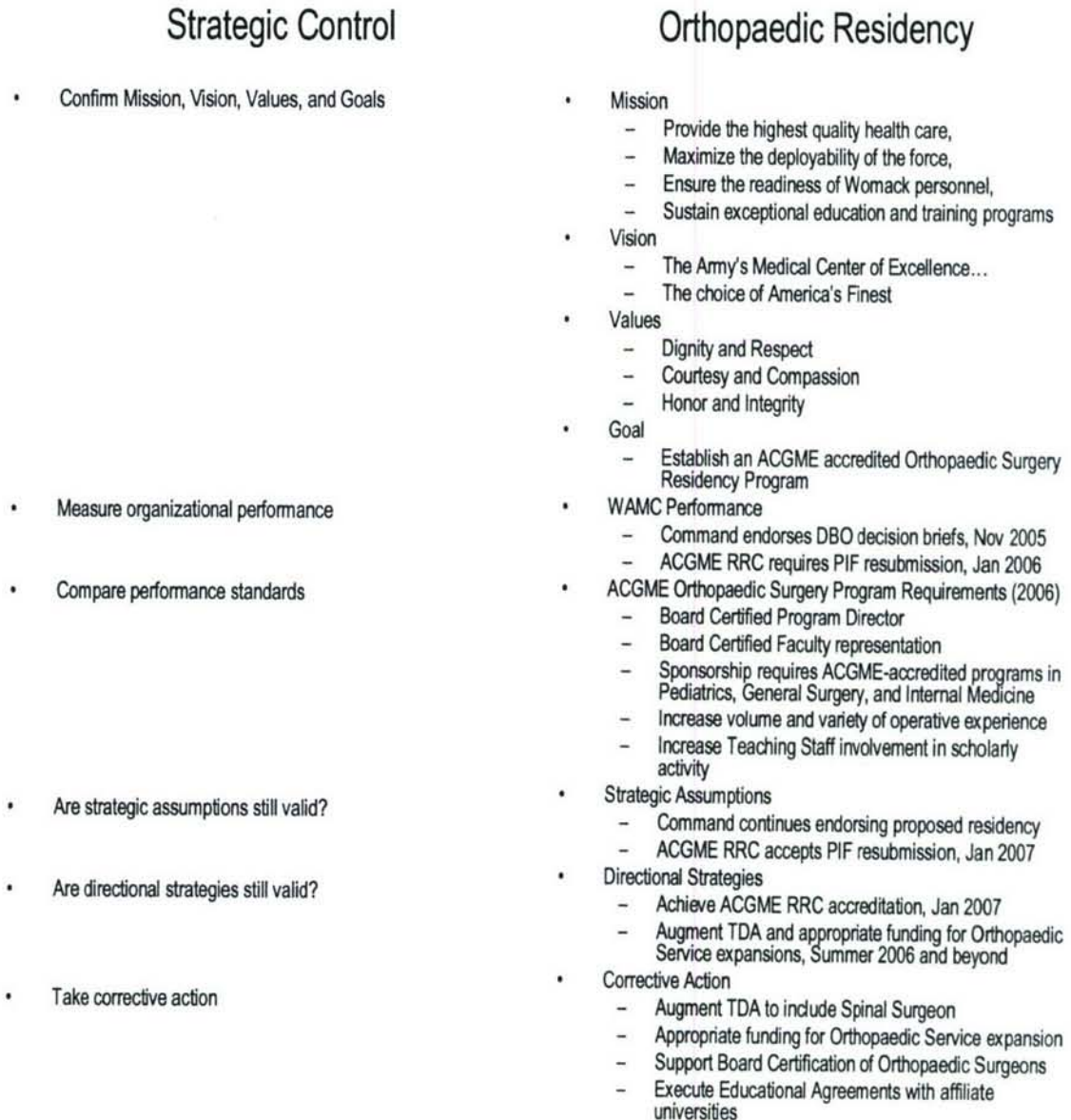


Figure 9. Strategic Controls in support of WAMC initiating an Orthopaedic Residency Program.

Interpretation of these strategic controls is presented in the Discussion section.

Discussion

This strategic planning project identifies a number of shortcomings in WAMC's intent to initiate an orthopaedic residency program. Most recognizably, the planning process has made clear the need for WAMC to staff a spinal surgeon and expand current total joint surgery capability to demonstrate the Medical Center's capability to support these specialty services required within an accredited Orthopaedic Residency. The Medical Center currently lacks ACGME accredited programs in internal medicine, pediatrics, and general surgery, each required in support to an accredited orthopaedic surgery program.

WAMC is currently involved with establishing academic agreements and shared clinical resources with multiple military and civilian medical schools. These educational and clinical agreements, while exceeding the scope of this project, impact the future of a proposed Orthopaedic Surgery Residency at WAMC. The Medical Center is currently engaged in the planning and execution of ACGME Residency Programs in General Surgery and Obstetrics and Gynecology. WAMC is also engaged in or finalizing partnership agreements with the Fayetteville Veterans Administration Medical Center, Johns Hopkins and Duke Universities. Successful execution of these partnering agreements will support current shortcomings in the clinical areas of pediatrics, general surgery, and internal medicine. Educational agreements with affiliate medical schools will further serve to address currently lacking academic emphasis. Lastly, expanding upon the current orthopaedic surgical services offered at WAMC will further serve to broaden operative experiences required in surgical residency.

Workload and Economic Analysis

Recapturing WAMC's currently referred orthopaedic total joint and spine service patient visits would place the Medical Center's orthopaedic workload above the level of comparable institutions, based on FY04 referrals and DOR workload (Figure 2). The economic impacted of expanding DOR services are presented in Appendix B. Total Joint Services (Table 1) and Spine Services (Table 2) expansion through additional staffing, equipment, and minimal facility modifications to recapture workload lost to the network in FY04 demonstrates a positive return on investment for the WAMC DOR. The proposed FY04 recaptured workload costs for each service (respectively) is indicated as Variable Costs and applied to both First Year and Out-year Costs as projected workload increases. The NPV for expanding Total Joint Services is \$24,408 in the first year, and \$34,408 in the out-year. The NPV for expanding Spine Services is \$160,013 in the first year, and \$304,403 in the out-year. The economic impact of adding an Orthopaedic Residency at WAMC is presented in Table 3. Adding the residency program to the WAMC DOR represents a negative NPV of -\$289,757 in the first year, and -\$233,897 in the out-year. The summarized economic impact of expanding both Total Joint and Spine Services and adding an Orthopaedic Residency Program to the WAMC DOR is presented in Table 4. The resultant negative NPV is -\$105,336. As presented, the identified loss to WAMC indicates the organization should not pursue implementing an Orthopaedic Residency currently.

Situational Analysis and the Organizational Setting

Porter's Five Forces Analysis reveals the Threat to New Entrants is low as the orthopaedic workload for WAMC exceeds that of Darnall Army Community Hospital, Ft.

Hood, TX, an Army MTF serving a similarly sized catchment area. As of 01 August 2005, the Prime Enrollment at WAMC was 117,935 beneficiaries, while DACH's Prime Enrollment was 105,782. The Intensity of Rivalry is high as five Army Medical Centers currently offer orthopaedic residencies. The Threat of Substitutes is high as Total Joint and Spine workload is currently supported through TriCare Services. The Bargaining Power of Buyers is low as the majority of the services proposed are non-elective treatments impacting Active Duty Service Members. The Bargaining Power of Suppliers is low at the present time as two additional Army Medical Center's Orthopaedic Residencies (WRAMC and BAMC) are projected to be significantly impacted through 2005 Base Realignment and Closure activities.

Stakeholder analysis specifies the depth and breadth of influences impacting and impacted by establishing an Orthopaedic Residency at WAMC. Stakeholder analysis further serves as a measure to ensure all influential parties are addressed during strategic planning. Mapping the strategic advantages and disadvantages of WAMC's plan to implement an Orthopaedic Residency draws attention to the residency program's negative NPV, indicating it would not be to the organization's advantage to implement the orthopaedic residency currently.

Strategy Formulation

Analysis of WAMC's directional strategy (Figure 7) linking the Medical Center's mission, vision, and values to the strategic goal of establishing an orthopaedic residency draws immediate attention to the final mission statement bullet, "sustain exceptional education and training programs." This review of the organization's mission statement indicates the Medical Center strategically recognizes the significance of continuing

education on healthcare. Had the Medical Center been lacking such a statement in either mission, vision, or values significant change to the organization's corporate agenda would have been necessary to support implementing the strategic goal of implementing an Orthopaedic Residency at WAMC.

Strategy Implementation

Unit action planning (Figure 8) in support of WAMC's goal to establish an Orthopaedic Residency delineates a phased approach required by multiple responsible parties to ensure success. DBO gained the endorsement of WAMC Command in early November 2005 following a series of decision briefs to the Medical Center EXCOM and the Army Medical Department's consultants to the Army Surgeon General for both Graduate Medical Education (GME) and Orthopaedics. Ms. Jarrell remains the proponent for continuity in DBO regarding the decision briefs and data monitoring. This command endorsement signifies the initial steps in pursuing appropriate staffing to support the Orthopaedic Service expansions into Surgical Spine and Total Joint Services. Funding for the residency program remains tied to results of the department's review by the RRC. WAMC's DOR submitted its original Program Information Form (PIF) to the ACGME Orthopaedic Surgery Residency Review Committee (RRC) on 15 November 2005 so as to ensure a completed submission by the 13 January 2006 RRC meeting. The results of the RRC review resulted in a requirement for resubmission based on currently lacking representation within the WAMC DOR of board certified surgeons and shortcomings in scholarly activity and clinical case mix. MAJ David Sickie remains the proponent for continuity in DOR regarding corrections to be annotated for follow-on PIF submissions as needed.

Strategic Control

Establishing recognizable controls such as continued endorsement of the Orthopaedic Residency decision briefs and RRC accreditation serve well to create gates and timelines in support of strategy implementation. Command endorsement in November of 2005 and the RRC review in January 2006 generated the input required to identify those actions necessary to attain an ACGME recognized Orthopaedic Surgery Residency.

Recognized performance measures most limiting to WAMC achieving its goal of becoming an ACGME Residency site for Orthopaedic Surgery are those identified by the ACGME RRC for Orthopaedic Surgery: Need for a Board Certified Program Director as well as certified faculty representation and faculty involvement in scholarly activity; affiliation with ACGME-accredited programs in pediatrics, general surgery, and internal medicine; and increased volume and variety of operative experience. Expanding orthopaedic specialty services to include total joint and spine surgery serves to increase the volume and variety of orthopaedic surgical exposure at WAMC.

Utility

The utility of this Graduate Management Project centers on insight gained through the strategic planning process. Stakeholder analysis, Porter's Five Forces Analysis, and a strategic map for discovering competitive advantages and disadvantages have highlighted areas on which the Medical Center must focus. These efforts include a projected modification of the organization's TDA to introduce specialized staffing so as to recapture lost workload currently referred to outside institutions. Workload targeted for recapture involves Orthopaedic Total Joint and Surgical Spine visits. Additionally,

identifying a directional strategy to include analysis of mission, vision, values, and goals, unit action planning, and controlling strategy through performance evaluation can further be used as specific measures to address both current and future command emphasis. The findings presented in this project lead to the recommendation that WAMC not adopt a directional strategy with the stated strategic goal of establishing an ACGME recognized Orthopaedic Residency. Though this strategic goal does support the Commander's Vision to become the Army Medical Center of Excellence, the economic loss incurred by the institution does not currently support adopting the initiative. The results of this study have been shared with the DBO process action team addressing the orthopaedic residency initiative and can be used in the future if and when similar initiatives are pursued within the institution.

Timeline

Biannual meetings of the Orthopaedic Surgery RRC within ACGME impose a timeline on WAMC's attempt to attain an orthopaedic residency. The Medical Center must ensure a successful RRC review at the committee's annual January meeting so as to ensure ample residency program execution time for the subsequent academic year. Simply stated, WAMC must attain recognition by the ACGME RRC for Orthopaedic Surgery by January 2007, for example, in order to acquire surgical residents by July 2008. Successful recognition in June meetings of the RRC of a given year does not support execution of a residency program scheduled to start in late July of that same year.

Conclusions

Applying a directional strategy with the strategic goal to implement an ACGME Orthopaedic Residency at WAMC supports the Medical Center Commander's Vision to be the Army's Medical Center of Excellence. Expanding Total Joint and Spine Services within the WAMC DOR presents a positive return on investment for the department and could therefore provide more immediate access to specialty care to Ft. Bragg's beneficiary population. Expanding upon these orthopaedic surgical services currently referred to the TRICARE network will demonstrate cost-savings for the Medical Center and will build upon the variety of services offered to the Airborne and Special Forces Soldiers as well as to the family members and retirees in the Ft. Bragg area. Each of these specialty surgical services are required elements of an ACGME accredited Orthopaedic Surgery Residency Program. However, WAMC currently lacks requisite programs in pediatrics, internal medicine, and general surgery necessary to support ACGME accreditation. Implementing an Orthopaedic Residency also demonstrates an economic loss to the organization. These central issues of program design and cost indicate WAMC should not pursue implementing an ACGME accredited Orthopaedic Residency currently.

A directional strategy with the specific goal to initiate an ACGME accredited Orthopaedic Surgery Residency does support the Command's current mission and vision to be the Army's Medical Center of Excellence. Porter's Five Forces Analysis identifies WAMC's current position among potential corporate threats, buyers and producers in the service area and suggests the Medical Center is in a position to maximize service expansion by way of recapturing orthopaedic workload currently referred to other

institutions. WAMC's DOR and DBO remain central to successfully executing unit action planning should the facility continue to pursue expanding orthopaedic services. Performance evaluation centered on command endorsement and ACGME RRC accreditation focuses future efforts on establishing mutually supportive residency programs in general surgery, internal medicine, and pediatrics as well staffing board certified surgeons should the facility pursue an Orthopaedic Surgical Residency in the future.

Recommendations

Womack Army Medical Center should not approach implementing an Orthopaedic Residency currently. The economic impact of such a program in the WAMC DOR presents a loss to the organization. The Department currently lacks requisite clinical programs in total joint and spine services. Orthopaedic service expansion should be considered as building upon current total joint competencies and adding spine services presents a viable venture, given the projected positive return on investment with the Orthopaedics Department. Efficient use of these expanded services could potentially offset the expense incurred in supporting an ACGME residency within the DOR. Staffing these additional service lines with board certified orthopaedic surgeons will support ACGME accreditation requirements should a residency program be considered in the future.

When viewed strategically, a directional strategy recognizing the institution's strategic goal of establishing an ACGME Orthopaedic Residency Program at WAMC does support the Commander's Vision to be the Army's Medical Center of Excellence. This forecasted goal ties into the organization's mission to offer exceptional education

and training programs. Should WAMC pursue expanding orthopaedic services in support of attaining ACGME accreditation in Orthopaedic Surgery in the future, the organization must avoid the seven deadly sins of strategy implementation while addressing the six core competencies identified by the ACGME. WAMC leadership must adopt an active role in communicating the relevance of an accredited Orthopaedic Surgery Residency within the facility's vision of being The Army Medical Center of Excellence. Command emphasis will reinforce the value of implementing this strategy and will aid in both patients and staff understanding its intent to better serve WAMC beneficiaries. Time and attention focused on establishing an ACGME residency program in orthopaedic surgery will reinforce the medical center staff awareness of the additional care that will be made available to patients through expanded services. Changes brought about through adding an Orthopaedic Residency at WAMC can therefore be translated into broadening patient care by way of increasing access to advanced orthopaedic treatment. Once in place, the Orthopaedic Residency must offer professional, systems-based medical care translating practice-based medical knowledge through interpersonal communication into compassionate patient care. Not only are these attributes of a quality residency program required for ACGME accreditation, they will arguably benefit the patients, family members, and staff of Womack Army Medical Center.

Appendix A: Glossary of Terms

Accreditation (Joyner, 2004): Method of maintaining established standards set forth by a given discipline, and the means by which these standards may be measured with the distinct goals of showing improvement and demanding accountability (p. 34).

ACGME: Accreditation Council for Graduate Medical Education

Controlling strategy (Ginter et al., 2002): An explicit process for refining or completely altering strategy in order to determine whether the organization is performing satisfactorily (p. 429).

DBO: Directorate of Business Operations

DOR: Department of Orthopaedics and Rehabilitation

Directional strategies (Ginter et al., 2002): Mission, vision, and values that guide strategists when making organizational decisions (p. 177).

EXCOM: Executive Committee

GME: Graduate Medical Education

M2: Military Health System Mart

MEDCOM: U.S. Army Medical Command

Mission (Ginter et al., 2002): A statement attempting to capture an organization's distinctive purpose or reason for being (p. 177).

NARMC: North Atlantic Regional Medical Command

Performance evaluation (Ginter et al., 2002): Evaluation of organizational performance against standards (p. 33). In the case of directional strategy, the organization's mission, vision, values, and goals establish the standard for comparison with the organization's performance (p. 434).

Porter's Five Forces Analysis (Ginter et al., 2002): Framework for analyzing the external environment through an examination of the competitive nature of industry including; threat of new entrants, rivalry among existing organizations, threat of substitutes, bargaining power of customers, and bargaining power of suppliers (p. 111-2).

Stakeholder Analysis (Ginter et al., 2002): identifying the reciprocal relationship between an organization and certain other organizations, groups, and individuals (p. 81).

Strategic Map for Discovering Competitive Advantages and Disadvantages (Ginter et al., 2002): Illustration of the process involved in determining an organization's source of competitive advantage (p. 145).

TDA: Table of Distribution and Allowances

Unit Action Plans (Ginter et al., 2002): Activities necessary to accomplish established objectives, in a specified timeline, and with identified responsibilities (p. 319).

Vision (Ginter et al., 2002): A statement intending to create a mental image of what the managers, employees, physicians, patients, and other stakeholders want the organization to be when accomplishing its mission (p. 177).

Values (Ginter et al., 2002): Principles held true by members of an organization (p. 177).

WAMC: Womack Army Medical Center

Appendix B: Economic Impact

(Addition of Services and Implementation of an Orthopaedic Residency at Womack Army Medical Center, 2005)

Table 1.

Economic Impact of Expanding Total Joint Services at WAMC

Womack Expenses			MHS Benefits	
Investments:	First Year Costs	Out-year Costs	Private Sector/Other MTF Care:	
Personnel:	\$ 79,341	\$79,341	Prime:	\$210,943
Variable Costs:	\$227,935	\$227,935	AD:	\$ 77,766
Equipment (OR):	\$367,546	\$357,546	TPC:	\$391,031
Travel:	\$ 2,500	\$2,500	Misc:	\$ 22,000
Facility Mods:	-	-		
WAMC Total Expenses:	\$677,332	\$667,332	MHS Total Benefits:	\$ 701,740
Net Gain:	\$ 24,408	\$ 34,408		

Table 2.

Economic Impact of Expanding Spine Services at WAMC

Womack Expenses			MHS Benefits	
Investments:	First Year Costs:	Out-year Costs:	Private Sector/Other MTF Care:	
Personnel:	\$825,034	\$ 825,034	Prime:	\$ 716,568
Variable Costs:	\$839,896	\$ 839,896	AD:	\$1,169,876
Equip: (Office/OR)	\$367,490	\$ 227,250	TPC:	\$ 258, 639
Travel:	\$ 2,500	\$ 2,500	Misc:	\$ 54,000
Facility Mods:	\$ 4,150	\$ 0		
Womack Total Expenses:	\$2,039,070	\$1,894,680	MHS Total Benefits:	\$ 2,199,083
Net Gain:	\$ 160,013	\$ 304,403		

Note: Variable Costs above represent FY04 recaptured Total Joint and Spine Services workload (respectively) applied to First and Out-Year projections.

Table 3.
Economic Impact of Adding Orthopaedic Residency at WAMC

Womack Expenses			MHS Benefits	
Investments:	First Year Costs:	Out-year Costs:	Private Sector/Other MTF Care:	
Personnel:	\$ 44,583	\$ 44,583	Prime:	\$
Variable Costs:	\$ 0	\$ 0	AD:	\$
Equip (Office):	\$ 22,960	\$ 0	TPC:	\$
Travel:	\$ 185,814	\$ 185,814	Misc:	\$
Facility Mods:	\$ 28,900	\$ 0		
Accred Fees	\$ 7,500	\$ 3,500		
Womack Total Expenses:	\$ 289,757	\$ 233,897	MHS Total Benefits:	\$ 0
Net Loss:	\$ - 289,757	\$ - 233,897		

Table 4.
Summary Economic Impact of Orthopaedic Service Expansion and Residency Addition

Expenses			Benefits	
Total Joint:	\$ 677,332		Total Joint:	\$ 701,740
Spine:	\$ 2,039,070		Spine:	\$ 2,199,083
Residency:	\$ 289,757		Residency:	-0-
Total Expenses:	\$ 3,006,159		Total Benefits:	\$ 2,900,823
			Net Loss:	\$ -105,336

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14. ABSTRACT This Graduate Management Project delineates strategic planning necessary to implement an orthopaedic residency at Womack Army Medical Center (WAMC). Ginter, Swaney, and Duncan's strategic planning process as outlined in "Strategic Management of Healthcare Organizations" (2002) provides an ideal framework to address functional team responsibilities and areas in need of further analysis. Currently, strategic direction toward implementing an orthopaedic residency at WAMC does not exist. This projects' utility centers on insight gained through the strategic planning process. Applicable measures to outlining WAMC's strategy include: stakeholders analysis; analysis of Porter's Five Forces Model; a Strategic Map for discovering competitive advantages and disadvantages; identifying a directional strategy to include analyzing WAMC's mission, vision, and values; unit action planning; controlling strategy though performance evaluation. A directional strategy is identified recognizing the strategic goal of implementing an orthopaedics residency at WAMC. Economic and functional analysis reveals this goal is unrealistic currently.					
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